

A black and white photograph of a person fishing at a waterfall. The person, seen from the back, is wearing a hat, a light-colored shirt, and waders, and has a fishing basket on their back. They are standing on a rocky bank, looking towards a powerful waterfall cascading over a large rock face. The surrounding area is wooded with bare trees.

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Photo by Charles W. Schwartz, Missouri

Flying Squirrel

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A Monthly Magazine for Higher Standards of Outdoor Recreation Through Wildlife Conservation

COMMONWEALTH OF VIRGINIA

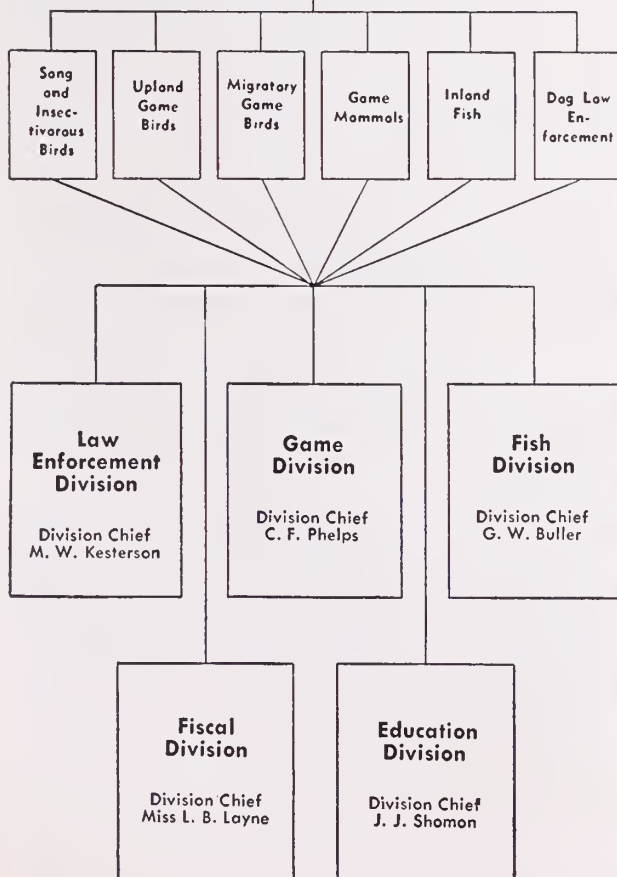


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Cover Photo

White water tumbling over the falls, and a deep pool below—this Virginia fisherman knows that there's bound to be a trout there!

Photo by Flournoy, VSCC

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE
|
SOILS — CONSERVE — WATER
|
FORESTS

Since wildlife is a beneficiary of the work done by State and Federal land-use agencies in Virginia, editorial policy provides for recognition of their accomplishments and solicitation of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given.

SUBSCRIPTIONS: One Year, \$1.00; two years, \$1.50; three years, \$2.00. Remittances by check or money order to be made payable to the Treasurer of Virginia. Local game wardens will accept subscriptions or they may be forwarded direct to Commission of Game and Inland Fisheries, 7 North Second Street, P. O. Box 1642, Richmond 13, Virginia.

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Trout Prospects

EACH SPRING, thousands of Virginians find something of a celebration in the opening of the trout season. Gaining in popularity every year, it is good to know that we still have an opportunity, as our grandfathers did, to slip away to one of our mountain streams and do battle with a spunky brook trout or the introduced aerialist, the rainbow.

Our editor, in this issue, has somewhat facetiously gone into the question of values in the article *What is There to Troutng . . . ?* and leaves us with a happy moral. There is much truth in it. In these troubled and difficult times, we need to rely upon wholesome recreation for a better perspective on life, and for recreating ourselves for the big and superhuman tasks that confront us.

If being out on White Top Laurel or Bull Pasture or Big Piney, casting a royal coachman to a temperamental 18-inch rainbow, will make better citizens of us, then the effort that is being made to perpetuate the sport of Izaak Walton is surely worthwhile.

This spring, as in other years gone by, your Commission of Game and Inland Fisheries has striven hard to make "opening day" and all other trout days until September as fruitful as possible. While the program of restocking lends an artificial aspect to the "purist's" conception of trout fishing, we must re-

member that our Virginia streams hardly lend themselves sufficiently to natural reproduction of trout in the quantity demanded by our fishermen. Consequently, if we are to have any semblance of trout fishing at all for the masses, restocking is necessary. And who can say that when spring arrives with all its grandeur, and anglers by the thousands are lured to the mountain streams, that the sport isn't worth it?

This year, according to Mr. G. W. Buller of our Fish Division, some 200 tons of large-size brook and rainbow trout have been released in something like 140 trout streams. Popular big rivers such as Big Stony in Giles County, Bull Pasture in Highland, White Top Laurel in Washington, South Fork of the Holston in Smyth, Jennings Creek in Botetourt, Pedlar in Amherst, and Clear Fork and Wolf Creek in my own county of Tazewell, have been heavily stocked, and only await the eager Waltonian.

Now that the big day is past, however, the day which to many of us epitomizes the fishing season, let us remember to be true Waltonians—not just on opening day, but every day. Only by observing the rules of true sportsmanship will we continue to make troutng the sport it is meant to be.

—Beverley W. Stras, Jr., Chairman

1951 Trout Season and Creel Limit

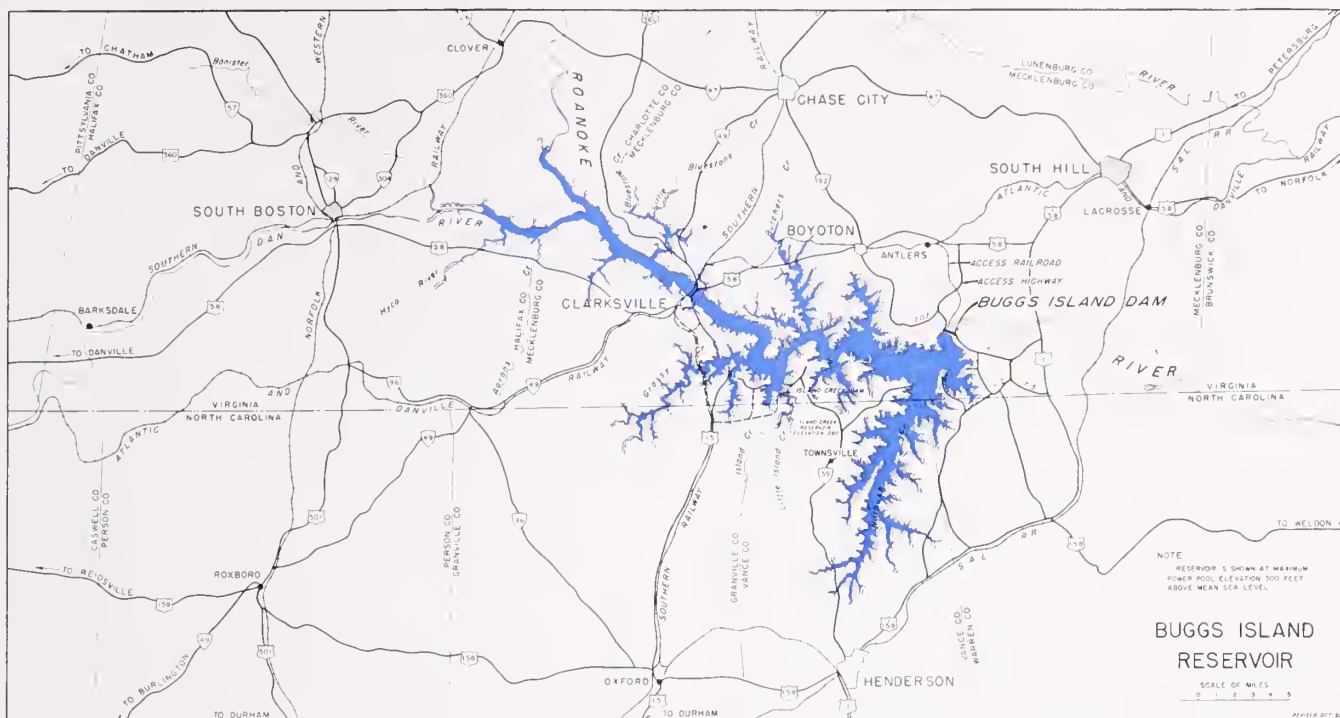
After much thought and serious consideration, the Commission finally established the dates and creel limits for trout fishing during the 1951 season.

Although many good reasons were advanced for changing the season to May 1 this year, the Commission finally agreed that since a large number of sportsmen had timed vacations to coincide with the usual April 20 opening date, it would cause too much disruption in their plans if the change became effective this year.

The season opened on April 20 as usual, but the opening time was changed from 5:30 A.M. to 12:00

o'clock noon. This change was expected to cut down on the number of "gun jumpers" who in their eagerness to fill their creels at the expense of the sportsman, ignore the starting hour and fish under cover of darkness.

Since the Commission felt that trout fishing is a sport and not a "meat-getting proposition," and since the trout stocked in Virginia's streams this year by the Commission were all two-year-olds, averaging 12 to 18 inches, the creel limit was set at 8 trout in order to spread the fishing opportunity over a greater number of fishermen.



Over 50,000 acres of water and 800 miles of shoreline will comprise the lake behind Buggs Island Dam.

The Buggs Island Project

By COLONEL W. F. POWERS

(Illustrations courtesy of U.S. Army, Corps of Engineers)

THE LOWER ROANOKE RIVER is now being harnessed by a reservoir development which is approaching completion—a development which will accomplish much for the State of Virginia. That is the Buggs Island Dam and Reservoir Project.

This large river development project, located on the Roanoke and Dan Rivers, is being readied to prevent the flooding of thousands of acres of good agricultural lands and industrial developments in the lower Roanoke River. In addition, it will develop hydroelectric power to help meet the growing needs of the adjacent communities, the industries, and the rural areas for electric power. This vast reservoir will help regulate the widely fluctuating flows of the Roanoke River and thereby vastly improve the water situation in the lower portion of this stream. Already a private power company has realized this value by requesting a permit from the Federal Power Commission to construct a \$27,-000,000 hydroelectric power project below Buggs Island.

The Buggs Island project includes a concrete dam

over a half-mile long flanked by nearly four miles of earth embankments. The concrete dam will rise to a height of 144 feet above the stream bed, comparable in height to an average 14-story office building, and will have a maximum thickness of 109 feet. Excess flow through the dam will be controlled by 22 huge steel gates located on the crest of the spillway. Six large outlet conduits will penetrate the base of the spillway and will permit additional discharge through the dam. A steel bridge will span the spillway to provide for the machinery which lifts the gates and for a public roadway across the dam. The powerhouse, which will house the electrical equipment, will be a concrete and brick structure, 600 feet long and 70 feet wide.

Recreation Area

Over 100,000 acres of land are being acquired for the storage of the waters to be impounded by the dam. Ownership of this land is necessary for the proper administration of the project after it is completed. To achieve a clean and pleasant shoreline, the Corps is expending over four million dollars to properly clear the reservoir. Between eleva-

The author is district engineer, Norfolk District, Corps of Engineers, U.S. Army, Norfolk, Va.

tions 320 and 300 the project provides space to store flood waters. These waters will be released as rapidly as possible without causing damage, in order to prepare for the following floods. Water stored between elevations 300 and 280 will be utilized for power production. Only in extremely dry years will it be necessary to draw the reservoir surface below the 280 level, the usual minimum power pool.

Recreational Resources

The Buggs Island Reservoir area will offer a large expanse of inland water with an irregular, wooded shoreline as the chief scenic attraction. Unlike a natural area such as a national park, the principal features—the dam and the lake—will represent an achievement of man on a large scale. The size of the project and the fact that it is man-made, will undoubtedly interest and attract many sightseers.

Climate, topography, vegetative cover, wildlife, and the large body of water are favorable factors for providing outdoor recreation. Within the reservoir many suitable areas may be found for the development of facilities to enable the public to enjoy many kinds of recreational activities such as fishing, boating, swimming, picnicking, camping, horseback riding, and other sports.

The lake with its 51,200 acres of water (at maximum power pool level), and with its many inlets, coves, and protected waters along the 800 miles of shoreline, will provide a tremendous recreational appeal to the people of the region. Some 3 million

persons reside within 100 miles of Buggs Island and over 700,000 persons are located within a 50 mile radius. Persons who reside within counties adjoining the reservoir will be able to reach the lake after work and return to their homes at night. It is anticipated that many week-end visitors will come to Buggs Island. While the reservoir may not compare in importance with the Atlantic Ocean, the large lake should have a drawing power for the people of a great inland section in which no other body of water of comparable size exists. Some persons will undoubtedly vacation in the area for one or two weeks. Special events, such as boat races and fishing contests, will draw persons from great distances. The size and shape of the lake will permit relatively long trips in boats of all types. Organized camping by youth groups should be popular. The above factors emphasize the importance of maintaining a policy which will protect the new recreational resources being created by the entire project so that these values may be used for the benefit of all the people and not wasted or forever lost through unplanned, undesirable, or haphazard developments.

Development of Resources

The questions that arise then are:

1. How will the recreational resources of the Buggs Island Reservoir be developed for public use?
2. When and to what extent?
3. How will the federal, state, and local gov-

A concrete dam over half a mile long and 144 feet high will restrain the waters of the lower Roanoke River.



Engineering plans show the elevation and sections of the new dam.

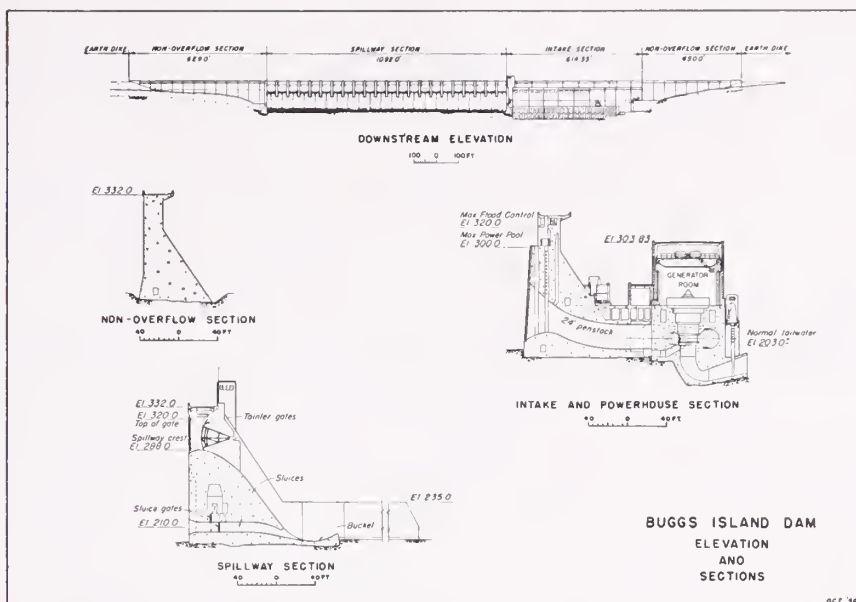


ernments cooperate in planning and in operating the area, after it is ready for visitors?

The answers to these questions are now being established with the appropriate federal, state, and local governmental agencies. In this connection, studies should be made which will indicate the location and desirability of providing facilities for boating, fishing, swimming, picnicking, camping, minor sports, hiking, vacation cabins, over-night accommodations, regatta course, excursion boating, and any historical areas. Also studies should be made to establish the programs required to properly manage the wildlife activities in and adjacent to the reservoir.

The states in which the reservoir is located are being encouraged to establish fish management programs with a view to reducing hazards to fish life, enhancing the production of fish in the newly impounded waters, determining whether artificial stocking would be effective in balancing the fish population in the reservoir, and for the proper control of rough fish so that there would be a balance in favor of the highly prized game fish. Since the Buggs Island Recreational Area lies in two states, visitors will frequently be subject to the laws and regulations of both states covering such matters as hunting and fishing licenses, open season, size limits, bag limits, and boat operations. Uniform laws and regulations attained possibly through a compact between the two states would be desirable, as they would eliminate a source of confusion and the possibility of unpleasant experiences.

When the partially wooded bottomlands are converted into a large deep reservoir, the wildlife will probably face problems of survival and re-adjustment. Except for designated recreational areas, federal lands will form a relatively narrow buffer strip around the reservoir. This buffer strip could form a sanctuary for wildlife by prohibiting the hunting of upland game therein. State participation in wildlife conservation activities on reservoir lands and even areas adjoining the reservoir would be desirable. The Buggs Island Reservoir will create thousands of acres which will be valuable as waterfowl resting grounds particularly during November and December, a factor which should also be considered in developing a conservation program.



A very important item to be given attention is forest conservation. It is understood that if the area around the Buggs Island Lake is reforested, adequately protected to prevent forest fires, and properly managed, that a high annual yield of timber crops can be sustained. Also since not all lands above the normal lake level will be devoted to recreation, a sizeable portion of the area will revert back to agricultural use. Accordingly, soil conservationists are establishing the proper manner for devoting these lands to agriculture, soil conservation, etc.

Current Recreation Planning

Just as many studies and "blueprints" have been made in planning the construction of the vast Buggs Island dam and power house, so must there be a considerable amount of recreational planning for the new lake and surrounding land areas. Such public use planning is necessary to assure orderly development and conservation of the reservoir area, and is indispensable in obtaining the greatest long-term benefits for the largest number of people.

Recreational planning has been provided for as an important part of reservoir management by the Congress of the United States, to the end that Army Corps of Engineer Districts generally throughout the country are staffed with personnel who are trained in this type of service. It is their job to make surveys and findings, coordinate the desires of state and local government agencies, and ultimately develop a master plan for public use development and the utilization of the entire reservoir area.

Such a plan is being prepared for Buggs Island Reservoir. The "spade work" has been completed

(Continued on page 12)

What Is There To Troutng...?

By J. J. SHOMON

TO THOSE OF YOU who have been exposed to the call of *Salvelinus* this discourse—if you want to call it that—will have little of the innovation. You already know what it's like to skip along a rocky gushing mountain stream and feel the thrill of a maddened brookie as he zips and tugs and performs aerial acrobatics on your line. This then, is hardly for you. But you fellows who've never been initiated to this most thrilling of pastimes might well pull up a chair and lend an ear.

How long the fresh water trout has piqued anglers, goodness only knows. That famous old prince of anglers, Izaak Walton, knew the thrill of "... the jealous trout, which low did lie, Rose at a well-dissembled fly," well over 300 years ago. The first edition of "The Compleat Angler" was published in England in 1653. Walton, in writing of the conference betwixt an Angler, a Hunter, and a Falconer, each commending his Recreation, says of the antiquity of angling that "it is as ancient as the Dencalion's flood; others, that Belus, who was the first inventor of godly and virtuous recreations, was the first inventor of Angling; and some others say . . . that Seth, one of the sons of Adam, taught it to his sons. . . ."

Any sport, then, that is said to be as old as Adam, must have something to it!

When does one become a trout angler? Some say you are not a Waltonian until you take to the dry fly and learn to take *Salvelinus* in your stride with a silver doctor or royal coachman. Others claim you're not properly initiated until you can tie your own flies and make a big brookie sail into a white miller during a May hatch under a rhododendron bush. Still others feel that real troutng must have a touch of the primitive—secluded waters, rough wilderness country uninhabited by man. Finally there are those who insist that a trout man is not a real disciple of the sport until he has risen to such fanciful heights as being a member of the royal brotherhood of the Jungle Cock, those piscatorial fol-

lowers who will not go after the elusive trout except with the artificial fly and the lightest of tackle.

I'm not quite that severe. For my money, you are a full-fledged trout addict if you can stand the embarrassment of a good old-fashioned dunking in a cold swift brook on opening day in April, and still come up, your woolen clothes dripping, fast to a lunging trout, and yet feel some self-satisfaction on being able to net your fish. There, and there only, do you find the sharp line of demarcation between the boy and the man, between the fellow who says "never again" and the guy who takes his dampness further on down the stream, unruffled and with little loss of face.

How well do I remember my first dunking, and as such, my graduation into the fraternity of trout anglerdom!

I was but five at the time, and fishing Smith's alder-lined, severely posted brook below our farm; I sneaked up on a big rock close to a swift pool, and perching there precariously like a puppy dog on an ice-floe, hurled my garden worm, which was at the end of a willow pole and a 15-foot heavy green line, into the swirling water ahead. Instantly, a powerful fish hit the bait and ripped away like a tethered young calf. Bracing all of my 50 pounds against the rock, I gave a mighty heave and my prize fish went sailing through the air, high over the alders, down on the bank, thrashing. But in the process I slid beautifully into the cold water, dunked to my ears!

Undismayed, however, I leaped out of the water, breathless, climbed the streambank and



sprang onto my nine-inch trout like a leopard. There I was, soaked and wet and dripping like a muskrat, but glowing all over, my heart pounding in my ears and knees wobbling unmercifully.

Yes, any nine-inch fish that can do that to a kid and set him on a life's exciting path of trout fishing is bound to have something to it. That small brookie, to my boyish mind, represented the height of piscatorial achievement.

Now there are trout fishermen and trout anglers, there are the worm-dunkers and the fly men, and there are the in-betweeners, like myself. They fill many categories but their lot is common: the lure that leads them is the same—the wily, unpredictable, discriminating trout. Unlike any other type of fishing, trouting is almost entirely a game of wits, a hide-and-seek. You battle your I.Q. and your 175 pounds against a sulking ten-

inch cold-blooded brookie, and have the time of your life. You creep, you crawl, you feel along and

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Conservation Over the Air Waves

By JACK LEWIS



Headquarters for the new weekly wildlife program is WMBG's modern studio in Richmond.

IT'S SURPRISING how long one can enjoy the lure of the field and the stream without realizing the effort that has been put forward to assure a continuous supply of fish and game. This effort is officially titled conservation, and needless to say, without conservation there could not exist, for long, lucrative hunting and fishing. In hunting and fishing, as in all organized sports, there is a certain governing body to safeguard, protect, limit, and to use that word again, conserve. This service is performed for the most part by our Commission of Game and Inland Fisheries, leaving for each of us but one task to perform, abide by what this Commission has proved is necessary to keep well stocked streams and an abundance of game. But before any of us can do our part, we must know what that part is, or in other words, a misinformed or uninformed hunter or fisherman cannot very well play an active role in conservation. That's where we of the radio industry believe we can play a vital part. Radio is a far more potent weapon than a gun, not to kill, but to *conserve*. It's not too difficult to imagine what would happen if there were no game laws, no creel limits, no closed seasons,

but equally so, it's not hard to imagine what would happen if no one was informed of these laws and regulations.

How many times has each of us longed for an opportunity to question some authority on some phase of hunting or fishing; i.e., where is there good public fishing? What is the creel limit on bass? When does the deer season close? Or any of a thousand other questions that only an authority could possibly answer. Your answers will probably be the same as mine, too numerous to recall. But how does radio fit into this program of projecting conservation to the sportsman? Conservation in order to be a success must reach people in every walk of life, and through the resources of radio, we believe this is best accomplished. Radio offers intimacy, immediacy and a certain power of realism and entertainment. It brings the desired information right into the listener's home almost as though it were directed personally to each individual. There is no barrier of time; as things happen, they're reported, precisely and completely, via radio. As for realism, nothing can compare with the genuine satisfaction of hearing for one's self, an authority's answer to

any particular question. Last, but far from least, radio is entertaining; it has that certain gift of making valuable information enjoyable. As it has been said before, education is the hardest thing in the world to sell, but radio has sold it by making it entertaining, and the American public wants to be entertained.

With these ideas in mind, Radio Station WMBG, with the cooperation of the Virginia Commission of Game and Inland Fisheries, Mr. J. J. Shomon, Chief of the Education Division of the Commission, and myself, began to anticipate a format for a hunting, fishing, and wildlife conservation program. One point was agreed, if a certain phase of, say, fishing was to be discussed, it would quite naturally be more entertaining to have an authority speak, rather than quote from any interview made prior

Top: Popular announcer Jack Lewis interviews Game Commission personnel on the program.

Bottom: Executive Director I. T. Quinn, Mr. A. H. Ware, and Commissioner of Agriculture Parke C. Brinkley make a recording in the field.



Photos by Game Commission and Bowles Studio

to broadcast time. Equally entertaining would be the opportunity of hearing this authority, whenever possible, speak directly from the location of his topic. In other words, if a hunting party were at the scene of a particularly successful hunt, just imagine the excitement that could be brought to the listener while it was all fresh in the hunters' minds, a word picture of the bagging of a seven point buck while it's actually happening. But just as we all enjoy hearing from authorities and from other sportsmen in the field, we also want to be informed periodically of what has happened in hunting and fishing and conservation in our locality. As one sportsman said, I quote, "Let us know what new laws are enacted." So from this, we decided a certain portion of our WMBG wildlife program should include information pertinent to hunting and fishing as well as conservation.

No matter how well planned any program format might be, there are always certain bits of advice or information associated with the individual sportsman. To project this information to the interested listener seems to be best accomplished with a simple question and answer period, when of course the audience is urged to participate.

Time was another item for major consideration, the show couldn't be so long it would drag, and yet there had to be sufficient time to present the requested information. We came to the conclusion that in a well rounded 15-minute show, ample time could be devoted each subject of interest to the sportsman without danger of losing interest with prolonged harangues.

The biggest single problem could have been the need for a source of authoritative information, but the Commission of Game and Inland Fisheries granted us their full cooperation and facilities, and for the first time in the history of Richmond, on Saturday, December 8, WMBG and WCOD-FM, between 12:30 and 12:45 P.M., began the first in a new series of wildlife programs. Although this new series necessitated a great deal of preparation, the real worth of the "Wildlife Show" probably won't be known for weeks to come, for to make the program a success we need the full cooperation and confidence of every sportsman in the state. We'd like the show to serve as a source of conservation, hunting and fishing news for the Virginia sportsman. The full and great resources of WMBG and WCOD-FM are behind this new wildlife series. It's sincerely hoped that the sportsman will enjoy the show as much as we at WMBG enjoy performing still another PUBLIC SERVICE.

BUGGS ISLAND

(Continued from page 7)

—field studies have been made and numerous maps and drawings have been prepared. Every interested federal, state and local governmental agency has been contacted, and the closest cooperation has been solicited. This plan, when finally completed and approved by proper authorities will then become the "master key" as it were to all future public use, planning, and construction in the reservoir area. Like all master plans, it will be somewhat general in scope, and of course subject to studied revisions and amendments as changing conditions may require.

The tentative selection of recreational sites on land owned or optioned by the Federal Government in the Buggs Island Reservoir area has been influenced by several factors. First of all these sites must be accessible by existing or proposed roads. They should be adaptable to recreational requirements by reason of suitable terrain, scenic qualities, and proximity to other sites or sheltered water areas. Water frontage and depth are important factors where boating and fishing are concerned, and the scenic qualities will be enhanced by a moderately steep lake bank, particularly during the low water period in fall and winter. It is important that each site selected shall have a sufficient area above the maximum flood water surface on which permanent structures can be built.

The tentative plan for public improvement of the reservoir area portrays numerous lands around the periphery of the reservoir which are known to have outstanding attributes for many types of recreational development. Still other lands will no doubt be most useful as agricultural, forestry, or wildlife conservation areas by reason of their inaccessibility or other peculiar characteristics. The entire Government-owned land and water region in the Buggs Island Project will be one vast conservation area in which every acre will be assigned some useful or productive role.

The recreational preference of park visitors throughout the country is indicated in a study conducted several years ago by the National Park Service, during the course of which over 7,500 park patrons told of the things which they are interested in doing while on their vacations. The eight most popular activities and the percentage of visitors manifesting interest in each was as follows:

Swimming	47%	Camping	16%
Fishing	41%	Hiking	15%

Touring	24%	Boating	14%
Picnicking	19%	Hunting	10%

Facilities already tentatively planned for the Buggs Island Reservoir project, and in which co-operating state and local agencies have expressed an interest, follow:

- a. "Marinas" and numerous boating access points with docking and launching facilities.
- b. Fishing access, including parking areas, piers, boats, docks and concessions.
- c. Picnic areas and playgrounds with shelters, sanitary facilities, etc.
- d. Cottage and cabin sites with vehicular access provided.
- e. Tent and trailer camping sites.
- f. Organized group camping sites with boating and vehicular access.
- g. Bathing beaches, bath-houses, etc.
- h. Club sites, major sports areas, and foot trail systems for hiking.
- i. Motor and bridle trails.
- j. At least one archeological or historical museum.
- k. Conservation and management areas for forestry, game, fish, and wildlife, throughout.

From the above list it is apparent that the reservoir area is eminently suited to a variety of recreational pursuits sufficient to satisfy the most exacting patron. Experience at similar projects throughout the country has shown that these facilities can and do become a reality. Almost invariably the number of visitors actually recorded greatly exceed the number anticipated from liberal estimates.

In Conclusion

Many new recreational resources are being created by the construction of the Buggs Island Dam and Reservoir; but the total recreational benefits to be derived depend to a great extent upon the proper use of these resources and the development of facilities. Some recreational benefits would be possible from the use of the new lake even though there were no development program, but they would be limited and meagre in comparison to the benefits that would accrue if appropriate and adequate facilities were provided.

For these reasons it is hoped that the state of Virginia, aided by its local communities, will assist the Corps and other federal agencies in formulating a plan, raising the necessary funds, and developing the recreational resources of Buggs Island Reservoir for the good of the state and of the country.

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

WORK ON 1950-51 ESSAY CONTEST COMPLETED: Preliminary work on breaking down the large number of essays received in the 1950-51 essay contest has been completed and the final winners are expected from the judges shortly. Present plans call for prize winners to receive their awards on May 17 this year. In addition to the cash awards, 200 "Certificates of Merit" will be given to outstanding entrants who did not qualify for the money prizes.

EXTRA WARDENS PUT ON DUTY IN TROUT AREAS: Mountain counties containing trout water received extra law enforcement personnel this year to cope with the heavy crowds brought out with the opening of the season.

In addition to the extra wardens, conservation officers of the Commission's famous flying squadron were sent into the trout fishing areas to aid in the work.

EDUCATION DIVISION CHIEF RECEIVES Y.M.C.A. AWARD: J. J. Shomon, chief of the Commission's Education Division, received a 10-karat gold service key from the Y.M.C.A. for service to that organization at the close of the "Y"-sponsored Model General Assembly in Richmond. Mr. Shomon has served as resource leader for the Committee on Fish and Game for the last three years.

HUNTING CHANGES CONSIDERED BY COMMISSION: Two major changes in the hunting regulations were on the agenda of the Game Commission for its April 28 meeting. The proposed changes were: a change in the present two-a-day, four-a-season regulation on turkeys to a one-a-day, two-a-season regulation for the coming year; and a change in the deer season west of the Blue Ridge from three open days to six open days. This issue of Virginia Wildlife goes to press before the meeting, but Commission action on the proposals will be reported in the next issue.

FISHING LICENSE FIGURES COMPILED FOR PAST FISCAL YEAR: During the fiscal year from July 1, 1949 to June 30, 1950, a total of 277,029 fishing licenses were sold in Virginia according to the tabulated figures.

Resident licenses accounted for 273,821 of the total, with the remaining 3,028 going to out-of-staters who wanted to sample the Old Dominion's fishing. A total of 532,722 dollars was taken in in license fees in the state.

STATE AND FEDERAL MEN DISCUSS HOG ISLAND DEVELOPMENT: Representatives of the U. S. Fish and Wildlife Service met with executive and staff members of the Virginia Commission of Game and Inland Fisheries at Hog Island during April to collaborate with the Commission in establishing a development program for waterfowl management on the newly acquired area.

Federal men at the conference were: Dr. C. W. Watson, Regional Federal Aid Supervisor; Richard F. Dittman, Regional Engineer; and William Baldwin, biologist and marsh ecologist.

The Virginia Commission was represented by: Commissioners T. D. Watkins of Midlothian, Dr. Warren B. Rains of Warsaw, and Dr. E. C. Nettles of Wakefield; and by Executive Director I. T. Quinn, Game Division chief Chester F. Phelps, Assistant Game Division chief J. E. Thornton, and game technician Charles Gilchrist.

COMMONWEALTH COMMISSION OF GAME AND FISHERIES RICHMOND

LIST OF RESTOCKED WATERS AND WATERS OPEN TO PUBLIC FISHING

County	Water	No. of Acres Boats		Owner or Concessionaire	Species Stocked	County	Water	No. of Acres Boats		Owner or Concessionaire	Species Stocked
					B Bream					BT Brook Trout	CGIF Conis
					C Crappie					RT Rainbow Trout	I at
					S Sunfish					RB Rock Bass	FWS U. S.
Albemarle	S. F. Moorman's R.	---	---	-----	BT	Dinwiddie	Baskerville Mill P.	20	---	C. F. Baskerville, Dinwiddie	LMB, C
	Moorman's River	---	---	-----	RB		Coleman's Pond	142	16	E. W. Coleman, Ford	LMB, B
	S. F. Rivanna R.	---	---	-----	B		Harry Wheeler's P.	75	---	J. P. Gilliam	LMB
	N. F. Rivanna R.	---	---	-----	B					Church Road	B, C
Alleghany	Simpson Creek	---	---	-----	BT		Stony Creek	---	---		B, C
	Potts Creek	---	---	-----	RT		Rowanty Creek	---	---		B, C
	Lake Douthat	50	20	DCD Open 6/1-9/15	LMB		Nottoway R.	---	---		B, C
	Cowpasture R.	---	---	-----	SMB, S	Elizabeth City	Big Bethel Res.	---	---	Open to service men only	
	Jackson R.	---	---	-----	SMB, S						
	Pikes Pond	25	---	Clifton Forge Rod & Gun Club	LMB	Essex	Piscataway Creek	---	---		LMB, B
	Bowyer's Pond	1/4	---	G. W. Bowyer, Potts Creek			Hoskins Creek	---	---		LMB, B
Amelia	Beaver Pond	196	10	S. S. Watkins, Amelia	LMB, C		Mt. Landing Creek	---	---		LMB, B
Amherst	N. F. Buffalo R.	---	---	-----	BT		Occupacia Creek	---	---		LMB, B
	Pedlar R.	---	---	-----	BT, RT	Fairfax	Cub Run	---	---		B
	Pine R. proper	---	---	-----	BT	Fauquier	Thumb Run	---	---		B
	Little Piney	---	---	-----	BT		Fiery Run	---	---		B
Appomattox	Holiday Lake	145	12	DCD Open 6/20-11/30	LMB, C		Crooked Run	---	---		B
	Phoebe Pond	4 1/2	---	R. W. Cullahan	LMB, C		Turkey Run	---	---		B
				Concord. N&W RR, owner			Licking Run	---	---		B
Augusta	Back Creek	---	---	-----	BT		Owl Run	---	---		B
	McComb Creek	---	---	-----	BT		Elk Run	---	---		B
	Crawford's Br. or	---	---	-----	BT		Deep Run	---	---		B
	Eastern Dry Br.	---	---	-----	BT		Big Branch	---	---		B
	Ramsey's Draft	---	---	-----	BT		Daniel's Pond	75	4	E. G. Daniels, Catlett	B
	North R. (stk. thru gorge)	---	---	-----	BT		Rappahannock R.	---	---		SMB, S
	Mossy Creek Dam	10	---	-----	BT	Floyd	Rush Fork	---	---		BT
	Mt. Solon Dam	4	---	-----	BT		Goose Creek	---	---		BT
	Sherando Lake	21	---	G. W. Nat'l Forest			Burke's Fork	---	---		RT
Bath	Big Back Cr. (stk. thru gorge)	---	---	-----	BT		West Fork Creek	---	---		BT, RT
	Big Back Cr. (above gorge)	---	---	-----	LMB, S		Howell Creek	---	---		BT
	Lake Douthat	50	20	DCD Open 6/1-9/15	LMB		Indian Creek	---	---		BT
Bedford	Bedford County Lake ..	32	18	Bedford Co.	LMB, C		Meadow Creek	---	---		BT
Bland	Dismal Creek	---	---	-----	BT		Beaver Creek	---	---		BT
	Nobusiness Creek	---	---	-----	BT	Franklin	Altice Pond	1	---		B
	Lick Creek	---	---	-----	BT		Angles Mill P.	20	---		B
	Wolf Creek	---	---	-----	RT		Arrington's Mill P.	---	---		B
	Hunting Camp Creek	---	---	-----	BT		Clement's Mill Pond	---	---		BT
	Clear Creek	---	---	-----	RT		Green Creek	---	---		B
Botetourt	No. Fk. Jennings Cr.	---	---	-----	RT		Hancock's Mill P.	35	---		B
	Mill Creek	---	---	-----	BT		Laprade's Mill P.	---	---		B
	Back Creek	---	---	-----	BT		McNeil's Mill P.	10	---		B
	S. F. Jennings Cr.	---	---	-----	RT		Rocky Mt. Power Dam	150	---		BT
	Roaring Run	---	---	-----	BT		Runnett's Bag	---	---		B
Buckingham	Horsepen Lake	23	---	S.E. For. Exp. Station	LMB	Frederick	Cedar Creek	---	---		BT
	Slate R.	---	---	-----	B		Paddy Run	---	---		BT
	Holiday Lake	145	12	DCD	LMB, C		Back Creek	---	---		BT
Campbell	College Lake	40	---	Lynchburg Col.	LMB		Opequon Creek	---	---		BT
	Timber Lake	80	yes	W. C. Tinsley, Lynchburg		Giles	Wolf Creek	---	---		SMB, S
Caroline	Goose Pond	100	2	H. V. Carter, Box 66, Milford	LMB, B		Walker's Creek	---	---		SMB, S
	Cooks Mill Pond	13 1/2	---	D. L. Cook			Big Stony Creek	---	---		BT, RT
				Bowling Green			Mill Creek	---	---		BT
Carroll	Paul's Creek, or	---	---	-----	BT	Gloucester	Burke's Mill P.	60	6	Fred J. Mason	LMB
	Fuller's Run	---	---	-----	BT					James Store	
	Stuart Creek	---	---	-----	BT	Grayson	New River	---	---		SMB, S
	Lovell Creek	---	---	-----	BT		Hilton Creek	---	---		BT, RT
	Stone Mt. Creek	---	---	-----	RT		Fox Creek	---	---		BT
	Road Creek	---	---	-----	RT		Big Wilson	---	---		BT
	Crooked Creek	---	---	-----	RT		Peach Bottom Creek	---	---		BT, RT
	Little Reed Is. Cr.	---	---	-----	RT		Chestnut Creek	---	---		BT, RT
	Billsby Dam	13	---	Appalachia E&P Co. I.D. Clark, Ivanhoe			Elk Creek	---	---		BT, RT
Charles City	Harrison Lake	160	8	FWS			Middle Fox Creek	---	---		BT, RT
Charlotte	Cub Creek	---	---	-----	B	Greene	Swift Run	---	---		BT
Chesterfield	James River	---	---	-----	LMB, C, S		South River	---	---		BT
	Lakeview Dam	150	20	J. Furman, Rt. 3	LMB, B		Middle or Conway R.	---	---		BT
	Swift Creek Lake	156	10	Petersburg	LMB, B	Greensville	Doyle's Pond	75	12	W. G. Doyle, Emporia	LMB
	Third Branch Lake	---	---	DCD			Slagle's Lake	---	---		LMB
Clarke	Shenandoah R.	---	---	-----	SMB, S	Halifax	Halifax Power Dam	250	---	VEPCO	LMB, C, B
Craig	Barbours Creek	---	---	-----	BT					W. W. Waldrop, South Boston	
	Meadow Creek	---	---	-----	RT		Poole's Mill P., or	---	---	A. E. Hite, Virgilina	
Culpeper	Mountain Run	---	---	-----	S		Hite's Pond	---	---		
	Cedar Run	---	---	-----	S	Hanover	Cross Pond	20	2	W. L. Cross (closed Sunday)	
	Hazel R.	---	---	-----	SMB		Duggan's Lake	30	13	Mrs. Kate Duggan	LMB
Cumberland	Bear Creek Lake	55	12	DCD, open 6/20-11/30	LMB		Crump's Pond	1	---	Hanover Industrial School.	
	Sports Lake	100	5	A. M. Johnson	LMB, C					Fishing by permission.	
	Trice's Lake, or	156	---	1214 W. Franklin, Richmond	LMB, C		Beattie's Mill P.	70	---	J. N. Beattie, Ellerson	
	Clearwater Lake	---	---	T. H. Kent	LMB, C		Fulcher's Mill P.	60	---	J. E. Jones, Beaverdam	
	Winston Lake	10	---	3012 Kensington Ave., Richmond	LMB		Hanover Wayside P.	4 1/2	---	Va. Highway Dept.	
Dickenson	Russell Fork R.	---	---	DCD, open 6/20-11/30			Woodson's Pond	25	---	E. J. Woodson, Beaverdam	
	McClure R.	---	---		RB		Little River	---	---		LMB, B
	Pound R.	---	---		RB		So. Anna River	---	---		B
		---	---		RB	Henry	Horsepasture R.	---	---		RT
		---	---		RB		Smith River	---	---		SMB, B
		---	---		RB	Highland	Headwaters of Jackson R.	---	---		BT
		---	---		RB		Back Creek	---	---		BT
		---	---		RB		Laurel Fork	---	---		BT
		---	---		RB		Crabbottom Creek, or	---	---		BT
		---	---		RB		S. Br. Potomac R.	---	---		BT
		---	---		RB		Bullpasture R.	---	---		BT

STATE OF VIRGINIA

AND INLAND FISHERIES

AND VIRGINIA

ACCORDING TO LATEST INFORMATION AVAILABLE 1950-1951 Restocking

Department of Game and Fisheries and Wildlife Service		DCD	Department of Conservation and Development		SMB	Smallmouth Bass		LMB	Largemouth Bass		
			R River								
County	Water	Acres	No. of Boats	Owner or Concessionaire	Species Stocked	County	Water	Acres	No. of Boats	Owner or Concessionaire	Species Stocked
James City	Powell's Lake	100	14	Mrs. H. A. Powell - Route 1, Williamsburg. Open 6/20-3/15	LMB	Prince William	Lake Jackson	750	2	C. W. Alpaugh, Pres. Lake Jackson Hills, Manassas Occoquan Hydro-Elec. Power Co., Hoadly	LMB
King & Queen	Sower's Pond				LMB		Delafield or Ryons Lake	628			B
King William	Mitchell's Pond	35	10	O. O. Mitchell Mangohick	LMB		Broad Run				B
							Kettle Run				B
							Decar Run-Occoquan Run				B
Lee	N. F. of Powell R.				RT	Pulaski	Claytor Lake	4,485	yes		BT, RT
	Powell River				RB		Max Creek				
	Indian Creek				RB	Rappahannock	N. F. of Thornton R.				BT
	Wallen's Creek				RB		Piney River				BT
Loudoun	Goose Creek				SMB, S	Richmond	Totusky Creek				LMB
Louisa	So. Anna R.				LMB, B		Cat Point Creek				LMB
	Little River				LMB, B	Richmond (City)	Swan Lake	13		City of Richmond	LMB
Madison	Collin's Pond	3		G. N. Collins, Wolfstown	BT		Forest Hill Lake	3		City of Richmond	LMB
	Rose River				BT	Roanoke	Carvin Cove Dam	650		City of Roanoke	LMB
	Rapidan River				BT					City Treasurer. Open 6/20-12/31	fishing
	Hughes River				BT						
	Robinson River				BT	Rockbridge	Mill Creek				BT
	Madison Power Dam				B		Bratton's Run				BT
Mecklenburg	Lake Gordon	157	30	CGIF	LMB, C		Irish Creek				BT
Middlesex	Dragon River				B		South River				RT
Montgomery	Radford Dam on Little R.	100		W. T. Well, city mgr., Radford. Closed 1/1-6/19. Restricted fishing.	SMB, S		North or Maury's R.				SMB, S
	Little River				BT, RT	Rockingham	Dayton or Silver Lake	11	12	City of Harrisonburg Water Department	BT
	S. F. Roanoke R.				BT		Dry River			Closed Sunday. Closed 1/1-4/19.	BT
	Bottom Creek				BT		Spring Creek				BT
Nansemond	Lake Cahoon	585	80	Portsmouth Water Dept. Closed 3/15-5/30. Closed Sunday. No bank fishing. No children under 9. Permit obtainable at lake.			Briery Branch				BT
	Wagner's or Scruggs' P.	120	10	E. O. Simons, RFD, Windsor		Russell	Clinch River				SMB, S
	Lake Kilby	190	25	Portsmouth Water Dept. Special opening and closing dates. Closed Monday. No bank fishing. No motors.			Big Cedar Creek				SMB, S
				Norfolk Div. Water Supply. Permit fee of 50¢ to fish, obtainable at lake. Closed Monday. Open 6/20-3/15.		Scott	Stony Creek				BT, RT
	Lake Prince	950	13				Stock Creek				RT
Nelson	Tye River proper				BT, RT		Cove Creek				BT
	Stony Creek				BT	Shenandoah	Big Stony				BT, RT
	N. F. Tye R.				BT		Little Stony				BT
New Kent	Walker's Dam on Chickahominy R.				LMB, C, B		Cedar Creek				BT
Norfolk	Lake Bradford			Open to servicemen only. Military reservation.			Passage Creek				BT
Northumberland	Ingram's Pond, Hurst, or Mt. Olive Pond	15		H. C. Thorndyke, Wicomico Church			N. F. Shenandoah R.				SMB, S
Nottoway	Nottoway Pond, or Crystal Lake	75	50	N&W RR	LMB	Smyth	Hungry Mother Lake	108	25	DCD. Boats from 6/1-9/15. Fishing 6/20-3/15.	LMB
Orange	Rapidan River				SMB, S		Middle Fk. of Holston R.				SMB, S
Page	East Hawksbill Cr.				BT		Comers Creek				BT
	Cub Run				BT		Hurricane Branch				BT
	Pitt Spring				BT		So. Fork Holston R.				RT
	S. F. Shenandoah R.				SMB, S		Laurel Fork				BT
Patriek	Round Meadow				BT, RT	Southampton	Nottoway R.				C, B
	Arrarat River				RT	Spotsylvania	Rappahannock R.				SMB, S
	Dan River				RT		Ni and Mat Rivers				B
	Big Ivy Creek				BT	Surry	Sunken Meadow Pond	200	12	Mrs. Mabel Contenbader Claremont	LMB
	Hooker's Creek				RT						
	Dan R., below pow. h.				RT	Sussex	Airfield Mill Pond	200	12	C. W. Kitchen	LMB, C
	Smith R., below the fks.				RT		Freeman's Pond	100		Wakefield. Special opening and closing dates.	
	Poorhouse River				RT		W. W. Harrell Pond	75	8	N&W RR.	
	N. F. Mayo River				BT		Harrell & Gray Pond	150	12	A. W. Harrell, Jarrett	LMB
	S. F. Mayo River				BT		A. D. Mayes Pond	75	6	P. T. Harrell, Waverley	LMB
	Rock Castle Creek				RT		G. L. Parson Pond	5	5	A. D. Mayes, Stony Creek	LMB
	Fairstone Lake	168	20	DCD, open for fishing 6/20-3/15. Boats 6/1-9/15.						G. L. Parson	Stony Creek
	Appalachian Power Dam			Appalachian Power Co., D. J. Hewitt, Stuart			Sussex Game Refuge P.			CGIF	
Petersburg (City)	Wilcox Lake	30	6	City of Petersburg		Tazewell	Little Tumbling Cr.				RT
Pittsylvania	Cedar Forest Pond	15		J. R. Hale, Altavista			Laurel Creek				RT, BT
	Giles Pond	30		Mrs. Ethel Giles, Gretna	B		Clear Fork				RT
	Turbin's Lake						Roaring Fork				BT
Prince Edward	Goodwin Lake	10		DCD, open 6/20-11/30	LMB		Cove Creek				BT
	Prince Edward	37		DCD, open 6/20-11/30	LMB		Wolf Creek				RT
Prince George	Baxter's Pond	42		CGIF	B		Clinch River				SMB, S
	Lake Hunt	15	2	Judge W. F. Binford	LMB, B		Little River				SMB, S
	Lake Binford	69	8	Prince George		Warren	Gooney Run				BT
	Community Fishing P.	8	1	Judge W. F. Binford			N. F. Shenandoah R.				SMB, S
Princess Anne	Lake Holly	20		Norfolk Div. Water Supply. Permit fee of 50¢ to fish. Open 6/20-3/15.		Washington	Big Tumbling Creek				BT
	Lake Smith	1,375	40				Straight Creek				BT
							Green Cove Creek				BT
							White Top Laurel				BT, RT
							S. F. Holston River (above Highway 58)				SMB, S
						Westmoreland	Chandler's Mill Pond				LMB, C
						Wise	Steeles Fork				BT
							N. F. Pound River				RT
							S. F. Pound River				BT
							Roaring Fork, or N. F. Powell River				RT
							S. F. Powell River				BT
							Guest River				RB
							Powell River				RB
						Wythe	Cripple Creek				RT

The Jack Miner Bands

By MANLY F. MINER

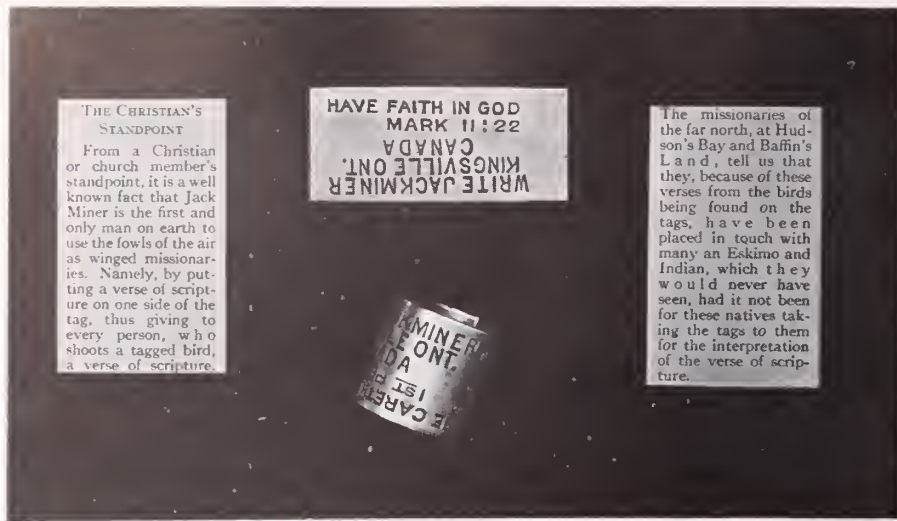


Photo courtesy of author

← Jack Miner's bands carry a message of faith wherever they go.

"Work consists of something one is compelled to do, but pleasure consists of something one is not compelled to do," said Jack Miner.

HOW TRUE THOSE words are! I can well realize their force when I look back some forty years, to August of 1909. Doing so, I fairly gasp for breath, seeing in perspective what a mammoth job it was for my late father and us, his three sons, to secure the first aluminum, buy our steel stencils to mark and address the bands, and then catch, band, and liberate fifty thousand ducks and forty-five thousand Canada geese. I can truly say that the period in which we did this was a happy forty years. And while we miss our dear dad who has just gone on ahead to reap his heavenly reward, we three sons are carrying on the work just as energetically as when father was with us. My younger brother Jasper, who is nearing forty years of age, is having a success in his bird-banding operations that quite equals that which we enjoyed when father was alive.

But the pioneer days especially stand out vividly in my mind because of the difficulties we encountered; it was a problem to secure the proper grade of aluminum; and it was another, and still greater problem to catch the birds. All credit is due our late father for his steadfastness in building and rebuilding his nets, time after time, and for his inventive genius which continued to improve them until they were perfected to that extent that he was able to capture thousands of ducks and geese annually. It is rare enough for us citizens to see waterfowl flying high in the sky, whether their flight be over our housetops in the city or over one's shotgun barrels in a marsh; but to attract them to

a pond and lure them under a net which can be closed down about them is something else again and a much more difficult proposition.

Much ink has been used in describing the value of the bird-banding in tracing the migratory routes of the waterfowl of this continent. But little or nothing has been told about how often my father sent me, as a boy, to a hardware store in Detroit to buy sheet aluminum (it could not be secured in Canada); or how hard it was to persuade a man to cut those sheets of aluminum into little pieces just the right length and width to fit round the leg of a wildfowl.

We soon learned that certain grades of aluminum were harder than others; and as we began to have bands returned by hunters who had removed them from the legs of birds they had shot, we soon found that some aluminum wore better than others.

In the spring of 1925 a group of men came to visit our Sanctuary from Pittsburgh. They came in three special coaches, with a special Pennsylvania engine hauling them. And what a historic visit that proved to be to us! In the group was one man, short and well dressed, who had very little to say. But after a time my father came to where I was, and I well remember the sparkle of pleasure that was in his eyes as he asked me: "Who is that man? He has just said he is going to supply the aluminum we need to carry on our bird banding and missionary work with the birds"

"Father," I said, "that is Mr. Richard B. Mellon, president of the Mellon National Bank and also president of The Aluminum Company of the world."

What a friendship sprang up between this visitor and my father! Mr. Mellon had his research department make a series of tests with aluminum; as

The author is the eldest son of the famous late JACK MINER, O.B.E. founder of the JACK MINER Bird Sanctuary, Kingsville, Ontario.

a result of these they finally decided on a special preparation of aluminum and tin alloy which they called half hard and half soft, for our use. As a result, each spring and fall we recapture birds that have been banded ten or more years earlier, and the bands show very little signs of wear. One goose which my brother caught had been banded twenty-four years before, and the inscription on the band was still perfectly readable. It was found that a soft preparation of aluminum wore much longer than a hard one, much as a gold ring on one's finger. Gold, as a metal, is soft; and many a gold ring has been worn for fifty years by its owner with little evidence of wear.

The nice thing about this story is that although Mr. Mellon predeceased my father by several years, which broke a true friendship, still each spring and fall the aluminum continued to come. Then in the fall of 1944 father passed away. He now has been dead five years, but still the aluminum comes for us boys to carry on his work. This is co-opera-

tion that could never be valued in dollars and cents. We boys, like our father, are truly wrapped up in our bird banding project, and it has meant wonders to us to receive this priceless assistance from the Mellon family. Yet we are not the only ones who have benefitted; the world has profited from the scientific data gained through my father's unique and successful system of bird banding and the long-term period over which it has extended.

To fashion these small pieces of aluminum into a round shape to fit quickly on the birds' legs, father had a home-made device in which he wrapped each individual band around a half-inch gas pipe. But how slow and laborious a procedure that was! I recall many a night when my father and younger brother would sit up into the wee early hours of the morning, bending the bands on this piece of gas pipe to shape them in a half-moon form so they could be easily clinched on the bird's leg.

At about the time Mr. Mellon promised to supply the aluminum, father was in Chicago giving a lecture to an audience that filled the auditorium of the Field Museum in that city. After the lecture, a man approached him and said, "How do you bend the aluminum into the proper shape?" So father explained. The man then said, "If you will send me a piece of flat aluminum and a piece bent in the proper shape and proportion, I will make you a little machine to roll these bands as you require them, and at the same time smooth the edges." Father did not know at that time that he was talking to Mr. Mueller, the world famous inventor. In about six months time there arrived a little machine into which one put the piece of aluminum; he then turned a crank and out would come the piece of aluminum shaped to fit the leg of a duck or goose.

This gadget is so unique, and works so fast that it will prepare in an hour in spring and fall, bands that by the old method took days and nights to shape.

The Verse of Scripture on the Band

While my late father was never looked upon nor referred to as a religious fanatic he certainly was a deeply sincere worshipper; and looking back over his bird-banding career I now can see very well what he meant when he would exclaim, "No work, or no life, is a success unless God is taken into partnership." The minute he started putting a verse of Scripture on each band it created national interest. And while the birds were used to spread the gospel, it enabled us at the same time, to secure scientific data as to the percentage of ducks and geese shot in each country and in each state and province.



Photos courtesy of author

Top: Thousands of geese find annual refuge at Kingsville.

Bottom: The late Jack Miner releases a tagged bird at the sanctuary.

Father was never concerned as to whether the male birds migrated north first, or not; all he was interested in was that there should be some left alive, of both sexes, to migrate.

The first inkling we had of the value of the verse of Scripture came from the far north. The Indians and Eskimos of the Hudson's Bay district, when they shot a goose, would take the band from its leg and bring it to the missionary. In turn, these men of God in the Arctic Circle, regardless of denomination, acted as our agents in collecting these bands, together with the data as to when and where the bird was shot. The religious aspect of it was that the missionary would tell the natives to come out to church or mass on Sunday, and he would take the verse of Scripture that appeared on the band as his text. If the band had borne only a number, all agree that these people of the far north would have found no reason to take it to their missionary. Also, as my father used to say, it is doubtful whether Mr. Mellon of the Aluminum company, or Mr. Mueller, the inventor, would have become as interested as they did in our bird-banding had it not been for the moral influence of father's putting on the bands such Divine messages as: "No good thing will He withhold from them that walk uprightly," "Have faith in God," "He careth for you," and so on.

Away back in the early days of his banding of the birds, it was hard for Jack Miner to convince officials of our Provincial and Federal Governments that there was a value in knowing where the most birds were being shot. When he had been banding birds for some twelve years (from 1909 to 1921) bird-lovers began to awaken to the usefulness and value of the great volume of information secured even during that early period. With this, there sprang into existence many bird-banding organizations which were very successful in banding thousands of songbirds and insectivorous birds; but none carried on the mass banding of waterfowl which was being done here at our Sanctuary and which was of the greatest importance to the sportsmen of the continent. The continent had no more enthusiastic promoter of bird-banding than our late Percy A. Taverner, Dominion ornithologist.

In 1921 the United States government began to

realize the importance of bird banding, and a department or agency in the Biological Survey was created which was known as the Bird Banding Department and acted more or less as a clearing station for all bird banding records. The Government voted money each year to have this work carried on in a national way.

In 1921, when this Department was created, full credit was given to the activities of my father who had pioneered in waterfowl banding on a mass scale. He, more than any other individual, was given credit for persuading the United States government to act as it did, because the late Dr. E. W. Nelson,

then chief of the Biological Survey, made three special trips to our Sanctuary to help us band ducks and geese. These visits were what sold him on the importance of bird banding. Well do I remember how, sitting with my father in front of our fireplace in the evening, he was spellbound by the evidence of letters and letters read to him which had been received by my father from sportsmen who had shot birds carrying our bands. It was convincing evidence for anyone, individual, or Government.

Yet, no matter how big a movement grows to be, nor how successful time proves it, always there are the little jars and forces of opposition that seem to take the joy out of everything. Such an incident happened a few weeks after my father's death—an action that hurt every one of us as a family and so deeply affected my younger brother that, though he is a man nearing forty years of age, he wept.

We all recognize the fact that the waterfowl and the other birdlife of the country belongs to the whole body of the people of North America, and that laws enacted for their protection are administered by the Canadian and the United States Fish and Wildlife services.

Two months after my late father died the wildlife administrator at Ottawa sent one of their civil servants here from the scientific research data department and informed us: "From now on, you will have to use another band, with a number on it and not a verse of Scripture." That this Canadian Department, hardly waiting until my father's body was cold, should demand that we relinquish the

(Continued on page 21)



Photo by Jack Van Coevering

Manly and Jack Miner and a friend.

The RAPPAHANNOCK

By JAMES WHARTON

The Rappahannock is a river of
beauty—and a river of history.
E→



Division Planning and Economic Development

THE RAPPAHANNOCK IS the only completely unspoiled river among the major ones left on the east coast. If this seems an exaggerated claim consider the rivers from Maine to Florida. One by one you will find them injured in some way—by cities, by factories, or by armed services' projects. Only the Rappahannock, possibly because it has forever been well isolated from railroads, has escaped. All along its shores at this moment, from the Blue Ridge mountains to the Chesapeake Bay you will find that somnolent beauty, that other-world quality, that freedom from fear, even, that might be calculated to appeal to harassed citizens no less than to the harassed wildlife of our country. Were Captain John Smith to sail again he would instantly recognize its unchanged shores. True, the mighty forests are gone, and scattered dwellings replace Indian settlements, but modern civilization has brushed it only lightly. In fact, even that imprint of progress which was the Rappahannock steamer from Baltimore has vanished, and with it the quaint lovely landings that dotted the banks all the way to Fredericksburg. The river actually seems immune to defilement.

It serves as the lower boundary of the Northern Neck, that polished gem of colonial civilization which gave to the world George Washington and Robert E. Lee, and which must ever take care to soft-pedal talk about its qualities lest perchance it be called ostentatious by an envious, less privileged remainder of the State!

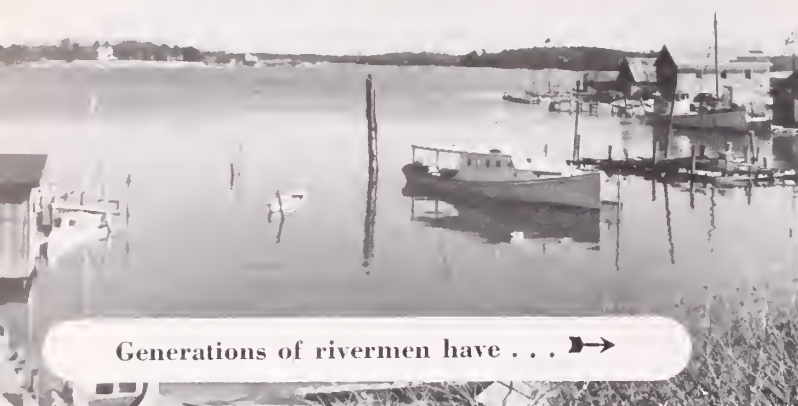
The Carter family, whose great luminary was Robert, called "King," were Rappahannock people, as were the Balls, Fitzhughs, Wormeleys and Tayloes. Their lordly homes lined the river during colonial times, but, with only a few exceptions, suf-

fered neglect and destitution in latter days.

Slaves from Africa streamed into the river during the early 18th century, and tobacco poured out of it to London. There was trade with the West Indies. Landon Carter, master of Sabine Hall, a notable two-century Rappahannock mansion that still stands, wrote of his father, the "King": "I believe no man ever sold more wheat and corn. I have known him load annually a large Bermudian and many vessels from Norfolk came for his wheat. Who exceeded him?"

When colonists attempted to nudge the entrenched Indians away from the lands they coveted it was found that so long as the bounty of the river was available to them they remained strong and war-like. "Keep the Indians inland and we'll master them," was the consensus of the whites. And so it happened.

Remnants of Rappahannock Indian tribes, occupying the land where they were long ago sequestered, are still to be found in bordering counties. They have preserved the lore of the out-of-doors. If the sun rises red and drops below a cloud in less than an hour, they say, it will rain before the day is over. If a cat licks its lips and looks up after eating, the wind next day will come from the direction of its glance. They engage in rabbit drives, beating through the woods with dogs and sticks and clubbing the animals to death when cornered. A feast follows, heightened by home-made apple-jack. These Indians at one time used poisoned arrows. The lethal principle was supposed to be rattlesnake venom mixed with poison-ivy juice. When they fished they used hooks fashioned out of a turkey bone or a fragment of thorn. They were noted oyster lovers.



Generations of rivermen have . . . ➔



. . . wrested wealth from the Rappahannock.

Photos by Kesteloo

They must have been fascinated by the action of the river: sometimes it flowed as rivers should flow, but with the incoming tide it reversed itself. They name it "Rappahannock" (or "Tappahannock"), which authorities on Algonquian dialects interpret as "river current which flows back again."

Just as life today on the river moves leisurely, so did history—at the rate of about a mile a year. Colonization began in earnest in 1650 when the Carters settled at a point 10 miles from its mouth. Tappahannock, 32 miles further up, became an official port in 1682, Leedstown, Port Royal, Falmouth and finally Fredericksburg became important commercial centers about 1750. The headwaters of the river 80 miles beyond the Fredericksburg falls gave Rappahannock county its name when it was formed in 1833.

Some 30 years later, history made perhaps its deepest mark when the happy land about Fredericksburg was torn in the North-South strife. It was at Port Royal, too, that John Wilkes Booth was caught and slain.

That the river appears to make history no longer, and that it resists the crushing burden of commercial enterprise and serves as an ideal medium for what Thomas Jefferson must have had in mind when he referred to "the pursuit of happiness," contribute to its uniqueness.

Its freedom from pollution—it boasts 40 miles of blue water, up to the point where its salinity diminishes—and its favorable position in the Chesapeake Bay system make it a prime source of fine oysters as well as other seafoods. Gourmets prize Rappahannock oysters and assert that the river's fame is sufficiently explained by them alone. Every spring hordes of shad and herring move up to its spawning grounds and are caught by commercial and sports fishermen. Rockfish turn up almost any time, winter or summer, and millions of soft crabs are present on the flats during moulting season. There seems to

be a shortage of croakers just now, but that may be because they are being avidly watched for by fishing crews with drag nets each almost two-thirds of a mile long! About thirty such nets are in use in the lower river—a statistic which surely bears witness to the abounding presence of marketable fish! Before the advent of such intensive fishing a hook-and-line boat returned to dock with at least a hundred fish or the trip was a bust. Bluefish come into the river on their own unpredictable schedule, and it was while fishing for them that the river's record hook-and-line catch was made: a 72-pound bonito by Captain Winnie Abbott, a party-boat man from Irvington. Runner-up was probably the 68-pound red drum caught by Robert George of the same village.

At Cat Point creek in upper Richmond county the large-mouth bass bite reassuringly. And way up in the hills at Remington, where the ruins of old navigation locks are still to be seen, the way the small-mouth bass grab your line is a caution.

The river is not so richly endowed with marshes as some others, but several exist which are prolific in muskrats, as well as inviting to wildfowl.

The owner of Blandfield marsh, some miles above Tappahannock, wishing to do what he could to attract wildfowl, decided to purchase some of the special grasses advertised by Minnesota growers—\$800 worth, in fact. But it happened that a Fish and Wildlife Service expert examined the marsh. "What is your opinion?" the owner asked. "I'm glad to be able to save you \$800," the expert replied. "I have found 19 varieties of grasses suitable for ducks already in your marsh, and you don't need to import a thing."

The attitude of Rappahannock hunters is not so liberal toward the practice of baiting as it is in some other sections; consequently, ducks and geese may be said to be a little less plentiful. But many

(Continued on page 24)

THE JACK MINER BANDS

(Continued from page 18)

original feature that was exclusively a characteristic of his bands, and that had proved so great an asset in the collecting of them, confused and hurt us deeply. I use the word "hurt" because we did not so much get angry as feel crushed. It meant I had to go to Ottawa and interview our cabinet ministers; and, since our Prime Minister and the members of his cabinet are all Christian men who believe in God, they all proved sympathetic to our continuing to use our bands as originally designed, with the verse of Scripture appearing thereon. As a result, all birds banded at The Jack Miner Sanctuary are still carrying the original Jack Miner band, and will do so as long as we band waterfowl here at the Sanctuary.

Now, on the other hand, Dr. Albert M. Day, chief of the United States Fish and Wildlife Service, recently (1949) wrote a book entitled "North American Waterfowl" and, naturally, wanted to include in it an account of the activities of The Jack Miner Bird Sanctuary. How overjoyed and honored we, as a family, felt when he wrote and asked permission to include a portion of father's book which dealt with this subject of how the birds had been employed as missionaries and the direct results that so often were seen in the changing of men's lives. We gave him permission to use any quotation from father's book, with or without a credit line. I am sure you as a reader—and especially our United States friends—will be glad to learn that your chief, Dr. Albert M. Day, realizes the spiritual value of our bands is unique and of far greater importance even than the purely scientific, although our bands possess both attributes.

About twenty-five years ago father, realizing the value of all our bird banding records, gave them to the Canadian Fish and Wildlife Service; and since that time, each year we add all our new records to them by giving full information received here as to when the birds are banded, and then the letters reporting bands found on birds slaughtered. In this way all our bird banding records are made public property and available for the use of the people of all the world.

So valuable are all these records, especially in determining the flight lanes of ducks and geese, that some three years ago Mr. Harold Hanson, a Wildlife student of Wisconsin, in co-operation with The Illinois Natural History Society and ourselves, began the mammoth task of compiling all these banding records and so arranging them as to be most accessible to those requiring to use them. The job now has been completed, and all that now is needed is a few thousand dollars to put the same into booklet form and distribute it free of charge to all Universities and other institutions of learning where such

information will do the most good for the most people.

As I look back over my late father's life and the activities he started, I am beginning to realize more and more what Mr. Frederick C. Lincoln meant when, at the time of father's death, he said: "Jack Miner was almost an institution." We feel that this statement, coming from Professor Lincoln who has had charge of all the early bird-banding records for the United States government since 1921, is one of the greatest tributes ever paid to him, and in itself evidence of the esteem in which Professor Lincoln held not my late father alone, but also the bird-banding feature which carried the word of God to hunters all over this continent, and also to those of the countries of Central America, and northern South America, as well as those of Cuba, Haiti and other nearby islands. By the help of God and the countless friends of our late father in every walk of life, we boys give our land and our time, and carry on the work he so well and wisely began.

WHAT IS THERE TO TROUTING . . . ?

(Continued from page 9)

peer around the bushes like a hunter stalking a stag, and all you're after is a tiny, finny vertebrate the size of your hand.

And this is not all. We must not forget the long hours of preparation that go into the sport before the first cast is made in the spring: the polishing, the gadget fixing, the equipping, and the wear and tear on household tranquillity.

Most folks would say that this kind of behavior is crazy, and they would probably be right. But it's a craze that seizes no fewer than ten million of us each year, and increasingly more. Call it what you will, it is a good craze: doctors advocate it, youngsters are fascinated by it, grown-ups who get the bug love it, and clergymen say it's good for the soul. It's just like what an old man said to me by the White Oak Pool on the Rapidan one spring day several years ago:

"Son," he said, "it hain't the catchin' of the trout that counts—it's bein' out here in the quiet hills, listenin' to the spring birds chatterin' in the hemlocks, seein' the boxturtles amblin' along the trail, and feelin' the cold water rushin' across your boots." Outwitting and landing your fish—sure—but how much more for the man's soul is it to meet a neighbor in midstream and for the first time in your life really know him as he really is!

What is there to troutin' . . . ? Well, I guess the old man really had something there, don't you think?

Problems of—

DEER HERD MANAGEMENT

By JAMES W. ENGLE, JR.,

District Game Technician

OUR VIRGINIA DEER HERD is more and more a topic of conversation when sportsmen and wildlifers get together. The increase in the sale of big game stamps from 4,948 in 1937 to 43,081 in 1949 is concrete evidence of this increasing interest. The restoration of deer to the western ranges of Virginia is pointed to with pride as one of the outstanding accomplishments of the Virginia Commission's Pittman-Robertson program in cooperation with the U. S. Forest Service and local sportsmen's organizations.

It is a healthy sign that certain groups of sportsmen are interested in our growing herd, and that they are interested in avoiding the deer herd problems of our neighboring states. Not too long ago, no group of sportsmen would have considered such problems, but now they realize that our game is one of our renewable resources and concerns everyone.

A group of Blue Ridge deer, descendants of the stocked whitetails of the past decade, graze peacefully in a mountain meadow.

Game Commission Photo



The deer in eastern Virginia, for the most part, are descendents of the original Virginia white-tailed deer. The deer in the western portion of the state came from a different source. In a few counties such as Bath, Highland, and Shenandoah, the deer herd was built back from the original stock. This was accomplished by a closed season, protection, and some restocking in certain areas. In other western counties, the present herd is a result of introducing deer from other states.

Beginning in 1935, and up to the present, there have been approximately 1,813 deer released in the restocking program. The records show that these deer came from several states—North Carolina, Pennsylvania, Florida, Wisconsin, Michigan, and possibly some from the New England region. As a result of this mixture of bloods, the offspring are probably not true northern white-tails, (*Odocoileus virginianus borealis*), or true Virginia white-tails, (*Odocoileus virginianus virginianus*). The northern bloodlines continually crop up, and can be recognized readily by the larger body and more massive antlers. Some people have expressed a regret that we did not get all of our deer from the northern states; however, at the time of the restocking, officials were glad to get deer from any source.

When the deer were re-introduced in the mountains, they naturally had to be given protection from free-running dogs and illegal hunting. To the state game wardens and game managers on both national forests goes a great deal of credit for the deer herd that we now have. These men could not give this protection single-handed, but they received the cooperation of the land owners and sportsmen to an extent that enabled the deer herd to increase to its present status, where it furnishes top sport to the people of Virginia.

Most counties in which the deer were stocked had a closed deer hunting season for at least five years after the last animals were released. This measure gave the breeding stock a chance to become established. In addition, some areas had a refuge or "closed area," in which all hunting was prohibited. It was thought that the deer would fill up the closed area and spill out into adjoining areas. This was



Photo by Kesteloo

Plowing and discing and planting of wildlife foods has made a tremendous difference in the amount of forage available to the mountain herds.

not the case in many instances, and it was soon realized in Virginia, as well as in some other states, that *permanent refuges for deer* are an out-moded tool in wildlife management.

The reason for this can be pretty well illustrated by recent work in Texas. Wildlife workers in Texas trapped deer, put bells on them, and released them, in order to determine the extent of the range for deer trapped and released at the same point. By listening for the bell, the extent of the deer's range could be determined, and seldom did the range exceed a mile and a half. The animals will remain in one area building up tremendous numbers, when better food may be found just over the next ridge.

West Virginia is experiencing this problem, and their yearly deer kill is less than that of Virginia. Refuges work satisfactorily for a species of game with a high radius of mobility such as waterfowl, but in the case of deer they have not proven worthwhile. As a result, the majority of the closed areas have been opened to hunting, and these portions of public lands put into use by the public.

A second tool of wildlife management used by the Game Commission to increase the deer herd was the enactment of the "Buck Law." There was a day, not too long ago, when sportsmen were shooting bucks, does, and fawns alike. At that time the

deer herd was rapidly declining. Most states have adopted the "Buck Law" and now it is so fixed in the minds of the present generation of deer hunters that it may be a problem to get them to ever shoot does.

Maine and a few other states have stuck to their one deer of either sex bag limit, and their deer herds are still increasing. A law such as the "Buck Law" was not intended as permanent, however, and is a *tool* to enable the deer to increase while allowing hunting. As long as no does are killed the yearly increase in the deer herd is not affected. The does are the factory that produces the increase, and we have been protecting this factory. The animals are born in a sex ratio of one male to one female, and probably for this reason they should be harvested at the same rate when we reach the total number of deer we want. At that time we should plan on harvesting, through longer seasons and more generous bag limits, as many deer as we raise yearly.

Some of course will object that when we start an antlerless season we will be decimating the deer herd. Close watch by wardens and technicians will prevent this. As long as we keep dogs and illegal hunting under control, we will be able to increase the season limit and bag limit.

It is the characteristic of deer to remain in the general vicinity of their birth that causes problem areas. Extreme concentrations of deer on the deer ranges will reduce the carrying capacity of the range. Abnormal numbers of deer will eat out all of the available food, and after this has happened the vegetation will not come back as thick as previously. The result is that the range cannot support as many deer as it did at one time. Evidence of this reduced carrying capacity will be evident by a reduction in the deer size, weight, antlers, and by a reduction in fawn production. Efforts should be made to reduce a deer herd three to four years before it reaches its peak. Only in this way will range conditions be protected.

Several methods of herd control have been tried in a number of states other than Virginia. The trapping of deer from high deer-populated areas has been tried without success as far as controlling the population is concerned. The trapping has been a fine tool for obtaining deer to restock other areas, just as was done in Virginia.

Chemicals to repel deer from crops have been used, and some wildlife workers report that they work very satisfactorily. Game in most instances is a *by-product* of the land, not *the product*. Game should be produced in accordance with good land

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THE RAPPAHANNOCK

(Continued from page 20)

a hunter remembers, before consciences became acute, when huge quantities of ducks were slaughtered and iced down in barrels for shipment to city markets.

The status of quail shooting is easily determined: look around for the bird dogs. You will find them in practically every other home.

There are yachting clubs at Irvington, Urbanna and Tappahannock which stage contests in power and sail racing regularly. The river is purely and simply a boating paradise. Its freedom from rocks and shoals, the accessibility of shelter at frequent intervals, the absence of big-boat traffic and armed-forces restricted areas, the infrequency of rough water, the wide range for navigation, and the endless invitations of picturesque inlets, combine to set it above any other comparable body in the United States.

Two bridges now span the Rappahannock: one at Port Conway, where James Madison was born, and one at Tappahannock, named the Downing bridge for the State Senator from Lancaster, re-

membered as a man of merry wit and infinite jest. A third is being planned. It will supplement the one now being constructed over the York to provide additional highway access from Norfolk to the North. It will abolish the present White Stone ferry, one of the very few remaining in Tidewater. A passenger on its twenty-minute ride has all the beauties of the lower Rappahannock spread before him. The river here resembles a bay. From October to April boats can be seen industriously tonging the famous oysters that can never meet the insistent demand. In the warmer months party boats are out angling for rock, trout and croaker. On the shores attractive homes, some restored, some modern, blend with the landscape. A cottage summer resort appears beyond a point on which an inoperative menhaden plant sits commandingly, its silvered stacks and storage tanks gleaming. A grove of lofty trees marks the spot where a camp meeting attracted hundreds of boats and throngs of people for a half-century. A few pound-nets fringe the shores, yielding their daily tithe of the Chesapeake's succulent fish. There is no better way to catch the spirit of the river than to take this ferry trip—while it lasts.

DEER HERD MANAGEMENT

(Continued from page 23)

use programs. When the number of deer reaches a point where they are interfering with good land use methods, it is time for some of them to go. For example, you would not expect a farmer with a truck garden or orchard to want very many deer around. Deer do not belong on such lands in large enough quantities to cause the landowner to lose money.

A discussion of money naturally leads to a controversial subject, that of damages which are a result of an over-population of deer. It is generally looked upon by workers in the wildlife field as an undesirable practice. Wildlife workers are, of course, in sympathy with the landowners who suffer such damage, but in keeping with good land use methods, the deer are by-products of the land. If the deer are present in such numbers that it is impossible to produce the product the land was intended to produce, such as corn, apples, or timber, then the deer herd should be reduced to the point where it is possible to produce the crop with a minimum of interference from the animals.

If the sportsman will take time to study Pennsylvania's deer herd, he will see a surprising similarity between Pennsylvania's past deer herd history and

Virginia's growing deer problems. Pennsylvania stocked nearly 1,200 deer from 1906 to 1924. They passed the buck law in 1907, and killed 7,778 bucks in 1924.* Much of their deer range was overpopulated with deer by 1928. Virginia stocked approximately 1,800 deer from 1935 to 1949; we passed the buck law in 1924, and a total of 7,021 deer were killed in 1949. Judging from wildlife worker reports and deer damage complaints, Virginia will be needing a doe season in many spots in the not too distant future.

The most natural method of controlling a deer herd is by sportsmen harvesting the crop of deer that is produced on the land. Like any other harvest, it must be managed so that seed stock is left over for another year. At present we are not harvesting the yearly crop of deer; we are merely skimming a little cream off the top in the form of a few bucks.

The term "Conservation" has come to mean *saving* to many of our people. They have forgotten that the real meaning of the word is "the wise use of our natural resources." If this thought will be kept in mind so that more *use* is made of our deer herd, we will avoid in the future many of the problems that other states are now facing.

*Latham, R. M. 1950. Pennsylvania's Deer Problem. *Pennsylvania Game News*, special issue No. 1, Harrisburg, Pennsylvania.



NEW TELEVISION PROGRAM FROM WASHINGTON

That well known and well liked editor of "Report From Washington" in the magazine *Sports Afield*, Michael Hudoba is now doing a program on television. He is heard and seen over Station WTTG-TV in Washington at 5:45 P.M. each Friday. It can be caught on Channel 5.

1951-52 DUCK STAMP ARTIST ANNOUNCED

MAYNARD REECE, nationally known wildlife artist of Des Moines, Iowa has been adjudged the winner of the Federal Duck Stamp Contest for use during the 1951-52 season. His design showing a pair of gadwalls rising from a lake was almost a unanimous choice by the panel of judges assembled to review the designs submitted.

The color of the new stamp has not been decided by the Bureau of Engraving, but it will go on sale as of July 1, 1951.

ANIMAL MOVIE SHORTS AVAILABLE

The Department of the Interior has announced the completion of two interesting movie films which are now available on request made to the Fish and Wildlife Service of the Department.

One film is entitled "Conservation In Action" and graphically reveals the work of the service in the preservation and protection of waterfowl, buffalo, mountain goats, moose, salmon and many other creatures of the wild.

The other film is entitled "Hunt-

ing the Puma" and is an exciting film which shows how the depredations of the predatory mountain lions are curtailed. In this picture unusual closeups show deer, big horns, wild burros, grizzly bears, coyotes, bobcats, and puma or mountain lions.

These movies take about 15 minutes to run off and are on 16mm



"Maybe we shouldn't have kidded him about his weird homemade flies."

sound and color film. Application for bookings should be made to the Division of Information, Fish and Wildlife Service, Washington 25, D.C.

FIGURES PROVE HIGHWAYS TAKE TERRIFIC TOLL OF WILDLIFE

An indication of the tremendous wildlife toll taken by traffic on the nation's highways is given by a recent report from the Pennsylvania Game Commission.

In District No. 1, consisting of seven counties in the northeastern

part of the state, a careful record of dead birds and animals removed from the highways by highway department personnel has been kept for a number of years.

During the past 10 year period, wildlife killed on the highways in this area and tabulated by the highway department reached the amazing total of 125,460 birds and animals. This figure did not include the many hundreds of road killed deer removed by conservation officers.

The figure, while very high in itself does not take into account the amount of wildlife crippled on the highway to die later in the woods, or those that might have been removed by the carrion eaters.

COLORADO RECOGNIZES BAL- ANCE OF NATURE PRINCIPLE

The complex principle of natural balance is well illustrated by the news items appearing in recent Wildlife Management Institute Report:

"Colorado has closed the trapping season on martens to step up its reforestation program in a beetle-infested area of the White River National Forest.

"This action is not quite so incongruous as it sounds. Maximum reforestation is assured when many seeds fall and germinate. Squirrels have been interfering with the process of storing pine cones for winter food. Since the marten relishes a seed-stuffed squirrel as much as a squirrel relishes a seed-stuffed cone, the more martens there are, the fewer squirrels there should be and the more seeds there are, the more pines there should be. All very simple. Or is it?"



Back Bay Fisheries Survey Under Way

Much interest attaches to the survey which is being made of Back Bay by Dr. Dean Rosebery, assistant chief of the Fish Division. Principal objective is to ascertain an approximation of the numbers of black bass present in this important angling body of water. A great many hitherto unknown facts about bass and their foods may be obtained through scientific investigation.



Photo by Kesteloo

Work now under way with the commercial fishermen in Back Bay should help the Commission in its scientific investigation of this famous fishing water.

A formula successfully adopted by the fish technicians in estimating fish populations is being put in practice in the bay. When a given number of fish are tagged and released, the percentage of these tagged fish caught later, along with the total number of fish caught, provides a fair percentage of the overall population of the fish which are present. Anglers will be asked to cooperate in reporting catches.

Wardens Now Taking Subscriptions For Virginia Wildlife

All wardens are now taking subscriptions for Virginia Wildlife. This has been assigned as part of their work by Commission Executive Director I. T. Quinn. Records are being kept of these sales. In March Ernest Yeatts, Washington County Warden, led with twenty five subscriptions. He was followed by A. L. Blankenship, Buchanan County Special Warden and D. A. Conner, Appomattox County

Warden, each turning in twenty-one subscriptions. No warden receives any commission for these sales.

National Forest Streams Stocked with 28,000 Trout by Federal Hatcheries

Trout streams in the George Washington National Forest were stocked this year with 28,000 fish, in addition to the stocking done by the Commission of Game and Inland Fisheries.

The additional fish were planted by game managers on the forest, and came from the two federal fish hatcheries at Leetown, West Virginia, and at Newcastle, Virginia. The fish were all year-old fish averaging about 7 inches in length. Over forty streams were stocked. The streams are listed as follows: Alleghany County—Smith Creek, Pounding Mill, Brushy Run, Jerry's Run, and Crows Run; Amherst—Staton's Creek, Brown's Mountain Creek, Little Irish Creek, Enchanted Creek, Otter Creek, Rocky Row Run; Augusta—Ramsey's Draft, Clayton Mill Creek, North River, Mills Creek, Kennedy Creek, Johns Run, Lick Run, South Fork Pads Creek, Left Prong Wilson Creek; Frederick—Paddy Run; Highland—Shaws Fork; Page—Passage Creek, Pitt Run, Cub Run; Rockbridge—Big Mary; Rockingham—Union Springs, Dry River, Gum Run, Briery Branch (above Mines Run), Mountain Run, North Fork Shenandoah; Shenandoah—Paddy Run, Ceder Creek, Little Passage Creek, Laurel Run, Little Stony Creek, and Peter's Mill Run.

Virginia Forest Service Erects More Highway Signs

The Virginia Forest Service is now in the process of erecting 1,200 additional metal highway signs with the wording "Crush Your Cigarette, Prevent Forest Fires" and "Break Your Match, Prevent Forest Fires" on highways throughout the Commonwealth. This will make a total of 5,400 signs strategically placed along all primary highways and all secondary roads, or an approximate spacing of one sign every seven miles.

CORRECTION: Wood duck photograph appearing on page 20, March issue of *Virginia Wildlife*, should have been credited to National Wildlife Federation, rather than to Wildlife Management Institute.

TROUT foods



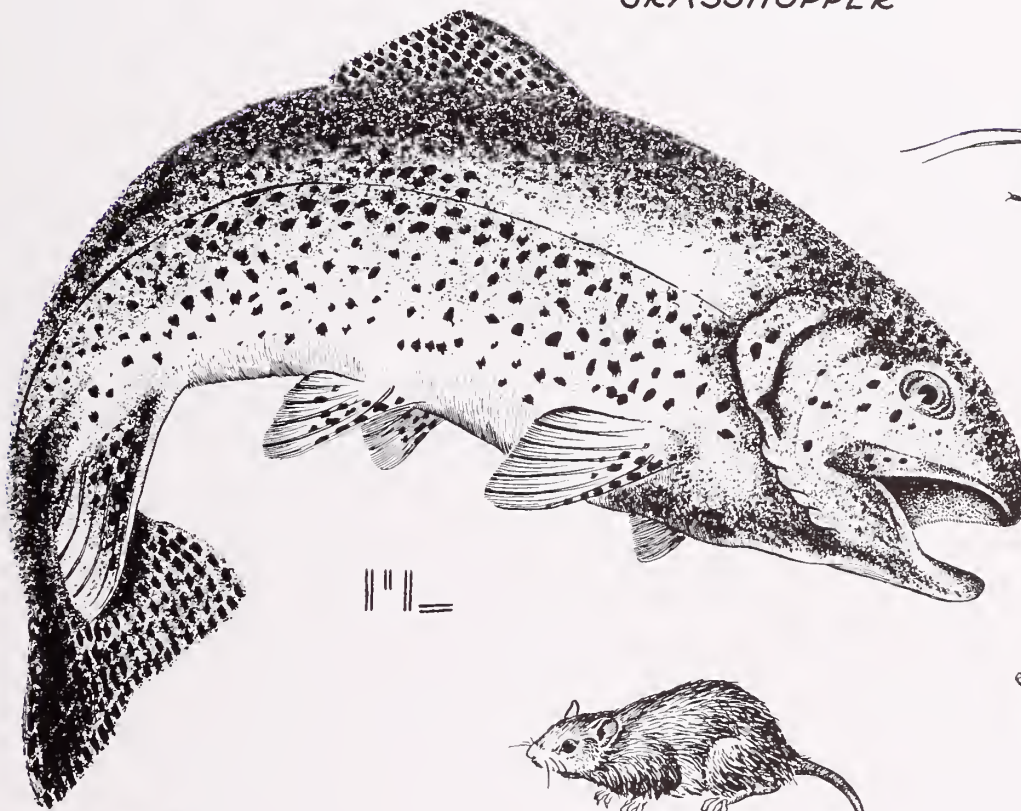
BEE



GRASSHOPPER



HELLGRAMMITE



CRICKET



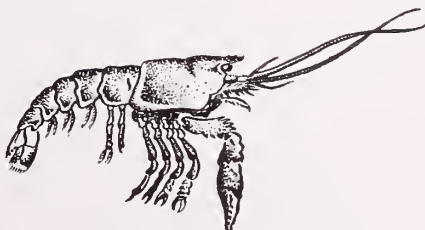
MOUSE



MAY FLY



FROG



CRAYFISH



EARTHWORM

CONDENSED VIRGINIA FISH LAWS

(SEASON 1951-52)

WALL-EYED PIKE OR PIKE PERCH

Open season: West of Blue Ridge Mountains, June 1, 1951 to December 31, 1951. (Exception—New River—June 1, 1951 to March 31, 1952). East of the Blue Ridge Mountains, June 1, 1951-March 15, 1952.

Creel limit: 20 a day.

Size limit: None. All to be kept as part of creel.

Note: (Pike, Jack-fish or Pickerel, no size limit and no closed season, creel limit 20 a day.)

BROOK TROUT—RAINBOW TROUT

Open season: From 12:00 o'clock noon, April 20, 1951, to one hour after sunset September 15, 1951, and from one hour before sunrise to one hour after sunset or intervening days.

Creel limit: 8 a day.

Size limit: None. All to be kept as part of creel limit.

LARGEMOUTH BASS—SMALLMOUTH BASS ROCK BASS

Open season: Large, and Smallmouth, Spotted and Rock Bass; West of Blue Ridge Mountains, June 1, 1951, to December 31, 1951; East of the Blue Ridge Mountains, June 1, 1951, to March 15, 1952.

Creel limit: Large and Smallmouth Black Bass, and Spotted Bass, 8 a day, 150 a season; Rock Bass or Redeye, 15 a day, 150 a season.

Size limit: Black Bass—10 ins. Rock Bass or Redeye—None.

CRAPPIE OR SILVER PERCH BREAM—OTHER SUNFISH

Open season: Continuous open season.

Size limit: None.

Creel limit: Bream and other sunfish, 25 a day in the aggregate of all species, including crappie.

LICENSES

County resident to hunt and fish-----\$1.00
State resident, to fish-----3.00

National Forest Stamp, to hunt, trap and fish-----\$ 1.00†
Nonresident, to fish-----10.00

License to fish not required of resident persons under sixteen years old. License not required of landowners, their husbands or wives and their children, resident or nonresident, to fish within the boundaries of their own lands and inland waters, nor of their bona fide tenants, renters or lessees, when they reside on such lands and have written permission of the landlord upon their person.

Any person commissioned or enlisted in the United States Army, Navy or Marines, while stationed or located in the county wherein the license is applied for, and any student regularly enrolled in any bona fide preparatory school, college or university in this State who presents a certificate of enrollment for the current year to the clerk of the county wherein such school, college or university is located, may purchase a county or state resident license.

†In addition to a license, a National Forest Stamp is required to hunt, fish or trap in the George Washington and Jefferson National Forests: Cost \$1.00.

SPECIAL REGULATIONS

Lawful Fishing—Fishing in the inland waters of this State shall be by angling with natural bait or artificial lures and a hook and line, attached to a rod or pole, either with or without reel or by tight-line, during the open seasons, including first and last days thereof, within the daily creel, season and size limits prescribed.

Unlawful Sale—It is unlawful to sell fresh water black bass, fresh-water trout and all other game fish taken in the fresh waters of the State.

Sunday Fishing—Sunday fishing is prohibited in counties of Alleghany, Bath, Bland, Botetourt (except in James River and Carvin's Cove), Craig, Giles (except in Mountain Lake), Highland, Rockbridge, Surry (except in Sunken Meadow Lake), Tazewell, (except in private ponds), and in Silver Lake in Rockingham County.

EXCEPTIONS TO STATEWIDE LAWS

Shenandoah National Park

Trout fishing only allowed within Park.

Following regulations govern only those portions of streams lying wholly within the Park: Sunrise to sunset from April 20, 1951 to July 10, 1952; minimum size 7 inches; creel limit 10 daily; only artificial bait allowed; state license required.

Blue Ridge Parkway

Conforms to State regulations except hours shall be from sunrise to sunset, and artificial bait only may be used.

Claytor Lake

Located in Pulaski County; boats available; year around fishing except unlawful to take bass during April and May.

COMMISSION CONTROLLED PONDS

Airfield Pond, Sussex County.*

Baxter's Pond, Prince George County.

Chandler's Pond, Westmoreland County.*

Game Refuge Pond, Sussex County.

Lake Gordon, Mecklenburg County.*

Phoebe Pond, Appomattox County.

Silver Lake, Rockingham County.* Daylight hours only. No Sunday fishing and closed from January 1 to April 20. Fishing hours—one-half hour before sunrise to one hour after sunset.

Creel and size limits: same as State laws and regulations.

Note: Boats with motor (except electric motor) prohibited on above ponds.

*—Indicates that boats are available.

Sherando Lake

Conforms to general State laws and following special regulations: Fishing permitted outside the swimming area. Trout and bass June 1-Sept. 3, 1951, 8 fish in aggregate of trout and bass; 40 a season. No creel limit on other species; size limit, brook trout 6 inches, rainbow 7 inches.

Big Levels Area

Conforms to general State laws and following special regulations: Open streams—all except Coles Run, April 20-July 31, 1951; size limit, brook trout 6 inches, rainbow trout 7 inches, creel limit, 8 a day; both artificial and live bait only may be used.

STATE PARK AND FOREST LAKES

Bear Creek Lake, Cumberland County.

Douthat Lake, Bath County.

Fairy Stone Lake, Patrick County.

Goodwin Lake, Prince Edward County.

Holiday Lake, Buckingham County.

Hungry Mother Lake, Smyth County.

Prince Edward Lake, Prince Edward County.

Winston Lake, Cumberland County.

Seasons, creel limits and size limits are the same as general State law for fishing. (Subject to closure by Conservation Commission through trespass action.)